Utah Department of Environmental Quality
Division of Solid and Hazardous Waste
FACT SHEET

May 2004

Class 3 Permit Modification:

Metal Parts Furnace (MPF) Spray Tank Demonstration Test at the Tooele Chemical Agent Disposal Facility (TOCDF), Utah

The Tooele Chemical Agent Disposal Facility (TOCDF), located approximately 20 miles south of Tooele, Utah, is preparing to thermally treat drained VX Spray Tanks in its Metal Parts Furnace (MPF). The MPF is a roller-hearth incinerator consisting of a Primary Combustion Chamber and a Secondary Combustion Chamber. Spray Tanks will be fed into the Primary Combustion Chamber where residual VX is volatilized and the tanks are thermally treated. The volatilized VX enters the Secondary Combustion Chamber where it is incinerated sufficient to meet a destruction removal efficiency of at least 99.9999 percent.

The Utah Division of Solid and Hazardous Waste (DSHW) oversees and has permitted operations at TOCDF under the Resource Conservation and Recovery Act (RCRA). RCRA is a federal law written to protect human health and the environment, reduce waste, conserve energy, and to reduce or eliminate the generation of hazardous waste. RCRA is codified under the Code of Federal Regulations, title 40, parts 260 through 299. The DSHW is authorized by the Environmental Protection Agency to enforce hazardous waste regulations in Utah. The State of Utah has codified its own rules under the Utah Administrative Code (the Rules) Sections R315-1 to R315-9, R315-12 to R315-14, R315-16, R315-50, R315-101, and R315-102.

The MPF is permitted to operate under the TOCDF Hazardous Waste Permit (the Permit). Preliminary data for the MPF VX trial burn shows that the MPF met the performance standards required by the Rules and the Permit. While feeding 45 pounds per charge to the MPF, VX destruction and removal efficiency was better than 99.9999 percent. The average VX feed rate was 33 pounds per hour.

In accordance with R315-3-4.3, the Permittee has submitted a permit modification request to update the metals table in Attachment 2 (the Waste Analysis Plan) of the Permit. The modification includes a shakedown plan for optimizing the MPF for Spray Tank operations and a Spray Tank Demonstration Test Plan (STDT) for testing emissions from Spray Tank operations. The STDT and appendices describe sampling trains that will sample for the emissions of VX, metals, particulate matter, carbon monoxide, carbon dioxide, and oxygen. VX destruction and removal efficiency will not be calculated since it has been previously demonstrated during the VX trial burn.

As outlined in the STDT, the Permittee proposes to feed 22 pounds of VX in each Spray Tank during the test. Fifty-four minutes is proposed to be the minimum time between feeding spray tanks to the MPF. All feed limits and MPF operating conditions, based on the preliminary data for the MPF VX trial burn and the STDT plan, must be maintained. The MPF VX feed rate is currently limited to 24.75 lb VX per hour or 75% of what was demonstrated during the VX trial burn.

VX Spray Tanks contain about 80 pounds of lead inside the nose

cone. Lead is also present in the munition paint and in trace amounts in the VX agent. Other heavy metals are also found in trace concentrations in the paint and in the VX. The Permittee proposes to drill a hole in the nose cone to eliminate the potential pressure buildup that could occur during heating in the MPF.

Engineering calculations show that most of the lead will remain embedded in the Spray Tank. The calculations show that trace amounts of lead, potentially emitted from the incinerator stack, should be at concentrations protective of human health and the environment as modeled by the Human Health Risk Assessment. Data from the runs will be used to validate the claims that lead emissions will be minimal.

Upon successful completion of the STDT, the Permittee will be allowed to process Spray Tanks one at a time until preliminary data are provided. Feed rates are proposed to be increased to 100% of the demonstrated rates upon approval of all MPF Spray Tank test data by the Executive Secretary.

In accordance with R315-3-6.3(b)(5), and based on the TOCDF trial burn data and engineering calculations, the Executive Secretary of the Solid and Hazardous Waste Control Board has determined that the feeding of VX to the MPF for the Spray Tank Demonstration Test will be protective of human health and the environment. The Executive Secretary proposes to allow the Permittee to conduct the STDT as outlined in the test plan and appendices.

In accordance with R315-3-6.3(b)(6), the Executive Secretary anticipates the TOCDF will commence shakedown activities for the MPF STDT (as amended by public comments) beginning after July 6, 2004. The test runs are expected to occur during two consecutive days following the shakedown period. The draft test plan and appendices may be viewed at the locations listed below.

- DSHW Offices, Martha Hughes Cannon Health Building, 4th floor, 288 North 1460 West, Salt Lake City, Utah. The pages may be viewed and copied between the hours of 8:30 a.m. and 4:30 p.m., or other hours with prior arrangement, Monday through Friday from May 18 through July 2, 2004, except for State holidays (May 31st).

- Tooele Chemical Stockpile Outreach Office, 54 South Main Street, Tooele, Utah, during normal business hours.

- An unofficial copy may be viewed at: http://www.deq.state.ut.us/EQSHW/CDS/CDS_PVA.htm

In accordance with R315-4-1.10, a Public Comment Period is being held to collect public input concerning this proposed test plan.

The comment period is scheduled to begin May 18, and will conclude July 2, 2004. A public hearing will be held concerning this test plan and appendices. A public hearing will be held June 24, 2004, at 6:00 p.m. at the Tooele County Courthouse, South Auditorium, 47 South Main Street, Tooele, Utah. Public comments will be collected at the hearing.

Anyone wishing to make comments is welcome to do so at the hearing or to submit written comments to the following address:

Mr. Dennis R. Downs
Executive Secretary
Utah Solid and Hazardous Waste Control Board
P.O. Box 144880
Salt Lake City, UT 84114-4880

Written comments on the test plan, appendices, and Permit change pages must be received no later than 5:00 p.m. on July 2, 2004. Public comments will be considered in the Executive Secretary's final decision on the MPF STDT Plan and appendices. The finalized test plan, appendices, and Permit change pages will be used to conduct the MPF STDT. After the test, submission of preliminary test results to DSHW, and review of the results by DSHW, the Permittee will be allowed to process Spray Tanks at the demonstrated feed rate.

Additional Information
This fact sheet briefly describes the Class 3 modification for the TOCDF MPF STDT. If you would like more detailed information or have questions please contact:

Martin Gray
DEQ / DSHW
P.O. Box 144880
Salt Lake City, UT 84114-4880
Telephone: 801-538-6170.

http://www.deq.state.ut.us/EQSHW/CDS/CDS_PVA.htm